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History without ice and boredom: the role of experimentation and digital literacy in history teaching

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Abstract: This paper explores the use of technology and digitised and/or born-digital historical sources for History Teaching. The discussion is contextualized considering the use of technology in Brazilian schools, but collated with examples from Europe and North America. Based on the author's research and hands-on experience on Digital History projects and classroom work, it discusses the potential of the digital component for a constructive pedagogy and critical teaching and learning of history. The author argues that the digital component can enable and catalyse active methodologies in the classroom, favouring the development of students autonomy in the construction and understanding of historical knowledge. The core advantage of bringing digital technologies and digitised and/or born-digital material to the classroom lies in the opportunity of learning by doing, acquiring new abilities for source criticism, as well as the necessary digital literacy to the handling of tools, interfaces and digital materials relevant to the learning environment.

Keywords: Digital History; History Teaching; Digital Technologies; Digital Literacy; Experimentation; Brazil.

História sem gelo e tédio: o papel da experimentação e da alfabetização digital no ensino de história

Resumo: Este artigo explora o uso da tecnologia e fontes históricas digitalizadas e/ou nascidas digitais para o Ensino de História. A discussão é contextualizada considerando o uso da tecnologia nas escolas brasileiras, mas reunida com exemplos da Europa e América do Norte. A partir da pesquisa do autor e da experiência prática em projetos de História Digital e trabalho em sala de aula, discute o potencial do componente digital para uma pedagogia construtiva e ensino crítico e aprendizagem da história. O autor argumenta que o componente digital pode possibilitar e catalisar metodologias ativas em sala de aula, favorecendo o desenvolvimento da autonomia dos alunos na construção e compreensão do conhecimento histórico. A principal vantagem de trazer tecnologias digitais e material digitalizado e/ou nascido-digital para a sala de aula está na oportunidade de aprender, adquirindo novas habilidades para a crítica de origem, bem como a necessária alfabetização digital para o manuseio de ferramentas, interfaces e materiais digitais relevantes para o ambiente de aprendizagem.

Palavras-chave: História Digital; Ensino de História; Tecnologias Digitais; Alfabetização Digital; Experimentação; Brasil.

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When I began to study the theme of digital history, I started by comparing the early appearances of it in the United States and Italy^{II}. In the case of the United States, the emergence of interest for this field began intertwined with the Basic Education classroom; a important connection with the didactics of History which has been considerable eclipsed in the most recent DH forums (Digital Humanities debates) today, favoring a reflection on methods for historical research. Roy Rosenzweig^{III} was one of the authors and creators of a CD-ROM called Who built America?^{IV}, with digitized primary sources to study the history of the United States. This material was then brought to the classroom so that, instead of coming with a text, textbook, or a ready-made digital text, for example, one could work on the sources and from them, to discuss with the students. Who Built America? received the James Harvey Robinson Award from the American Historical Association for its "outstanding contribution to the teaching and learning of history". V The success of the first CD-ROM prompted Who Built America? to continue the series, giving rise to two other "electronic textbooks", so to speak: Who Built America? From the Great War of 1914 to the Dawn of the Atomic Age in 1946, a multimedia CD-ROM (New York: Worth Publishers, 2000), of which Rosenzweig was chief author and executive producer; and Who Built America? Working People & the Nation's Economy, Politics, Culture & Society (New York: Worth Publishers, 2000), of which he was guest author on volume II.

Regarding the field in Brazil, we have only seen in the last decade the emergence of specific study centres – institutional spaces dedicated to the theme of the digital in intersection with the humanities and history – more specifically, as the newly created Digital Humanities Lab of PUC-Rio (dhLAB), the Getulio Vargas Foundation (LHuD, CPDOC/FGV), UFBA (LABHD), the Digital Humanities Networking Lab of the Brazilian Institute for Information in Science and Technology (LARHUD, IBICT), and the first Digital History Lab in Brazil, LAHISD, of the Federal University of Uberlândia ^{VI} Therefore, it is plausible to state that in Brazil, the place of experimentation, discovery, contact and attempts with technologies has been the schools's classroom *par excellence*. In 2019 Professor Dilton Maynard, from the Federal University of Sergipe, was in Luxembourg visiting the Centre for Contemporary Digital History (C2DH) and gave a speech to give an assessment of digital history in Brazil: The Basic Education classroom is a real laboratory of digital history ^{VII}. Sometimes, there is a prejudice that to do digital history everyone has to be, as the French historian Emmanuel Le Roy Ladurie supposed, a super programmer and master everything ^{VIII}.

Discussion

When thinking about the classroom and the experimentations that have been taking place, we have reasons to think the opposite. About the experiences on the floor and on the screens of the classrooms of basic and higher education, with Pedro Telles da Silveira, we made a brief mapping that, despite its limitations of scope, has shown how fertile are these opportunities for teaching and learning in interaction with technology. Thus, following Maynard's thought, there it is just fair to consider the classroom space as a true laboratory of digital history). IX A laboratory that, sometimes, will be more similar to a digital workshop of history, where the *digital* adds more to the working modes and tools and not necessarily to the final product of their creations.

I have been thinking a lot through hybrid subjects and hybrid practices, since we are not only analog or digital. We acquire new routines, more or less discrete, in which we also shape new skills in the interactions we need to perform with the tools we have in our inventories. Gerben Zaagsma

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introduced the notion of hybridity within the discipline of history itself in his text *On Digital History*, arguing for a hybridity that could occur within the historical community of practice itself. Pragmatically, he points to the need of bringuing together and equalising our old and new sets of practices by reviewing our current ones:

The current challenge facing the discipline of history is not in creating ever bigger sets of data and developing new tools, important as these are. The real challenge is to be consciously hybrid and to integrate 'traditional' and 'digital' approaches in a new practice of doing history (I realise that the concept of hybridity might underscore the dichotomy I have argued against earlier, but it seems to me a necessary sensitising concept to accompany the conscious mental transition that I deem so important).^X

Much of what is to come in this hybridization horizon is still unclear to us, mainly due to the so-called black boxes of technology – processes that are implicit or omitted at the expense of the presentation of results. A fine example is when we do a Google search. If we were all now to search for "digital public history" from our personal computers and browsers, we would each get a different number and time of search results; and we would probably also find a different ranking in the search results. I would probably get much of the same as I always search, simply because of non-apparent issues of how the algorithms work.

To think about this issue from the point of view of the public commitment of citizen education with the school public, but also as a fundamental service to the population, the most reasonable way would be to think about the inclusion of digital literacy^{XI} in the curricula. And it would be necessary, for the best fruition of this in classrooms, that it was also taught in the training (basic and continued) of teachers. It is necessary that we denaturalize technologies as neutral components. Unfortunately, there is still much dazzle with certain tools and projects, and this creates a distraction that should not, but sometimes, eclipses criticism. In this way, the dazzle or technological fetishism, collaborate too much to reinforce the black-boxes mentioned earlier. It all seems to work very well, so why should I question it? And here we are only contemplating the surface of the problem, for example, this idea that Google is the whole internet. Google is not and does not contain everything on the internet. Google is a search engine, which sometimes excludes and gives relevance to certain content arbitrarily. There are many similar veils, and they need to be lifted.

I believe that to achieve a more critical stance at this time of transition to an extreme digital culture – a fundamental commitment of citizen education – we need to take this concern with digital literacy to all educational levels. A path that we can explore further at this crossroads of history with technology and education is that of *inter-* and *transdisciplinarity*, depending on each context, paths that allow us to work in collaboration with professionals from other areas in this endeavor to open the black-boxes. The experience I had in Luxembourg during my doctorate was very special in this sense, but it was also a question of serendipity. I ended up in Luxembourg aiming to work in a digital history laboratory, since at the time I applied for the scholarship, here in Brazil these spaces were not yet formed as they are today.

My aim with my doctoral research was to get my *hands dirty*, to try to do the historian's workshop with my own hands and experiments^{XII}. However, when I arrived at the Grand Duchy, the laboratory was only a room with computers that had been setting up a program of activities on the theme. The open mentality and the will for experimentation existed, but institutionally it had not yet

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become viable at all. It was only after the founding of the Centre for Contemporary and Digital History (C²DH)^{XIII}, that this laboratory ethos did came to life, with the new staff arrivals and engagement. They were professionals in the field of history, but also in technology, such as Computing, Design and other disciplines that helped to explore the possibilities of applying technology to the work of the historian. In the very first months of the centre's creation, a *Digital Research Infrastructure* axis was established. It was a paradigm shift to have, on the same floor of the building, in the same corridor, information science and computer science professionals working together and having coffee with historians.

My doctoral project and its technical dimension, the Memorecord platformXIV, advanced thanks to this kind of contribution from other areas of collaboration. In the so-called "trading zone of Digital History"XV the black-box may not open completely, but it begins to show cracks through which we can start to apprehend some processes. So, although today I still cannot accomplish everything by myself, after this collaborative exercise, I expanded my conditions to grope the digital path. It is a process, as Zaagsma pointed out, of hybridization and, as said above, of acquiring new repertoires and, why not, new heuristics to deal with the rematerialization, the digitalization and the technological remediation of our sources and processes of understanding the past. It is not a matter of a mere change of support or formats, in the passage from analogue to digital; what we experience in this transition crosses society in its whole culture. Such change will demand from us our ways of reading and interpreting the whole, including not only digital materials (born or digitalised), but also processes, forms of sociability, communication, work, manifestation and everything that is crossed today by technological ubiquity. Therefore, the new repertoires, the new heuristics are welcome; and to reach them and learn them in such a way that we can also teach them, requires openness to experimentation, to collaboration and all the craft and intellectual work that allows us to advance in the accumulation of this new knowledge, this digital literacy.

For this discussion, the experiment conducted by two researchers at Memorial University in Newfoundland, Canada, is quite eloquent. In *The Democratizing Power of Online Sources, Valerie Burton and Robert Sweeny describe their case study (2015)*. They invited two groups of students in training (bachelor and undergraduate in History) to work with a certain set of sources in analogue format more specifically, Maritime History sources, and the other group of students, in the same amount, to work the same set of sources, but digitized and made available in an environment that already had the visualization of a preview of the document, with its metadata, with description, and all the rubrics added for its deposit in that particular digital collection possesses. The students of both groups were asked to read and interpret the documents and answer the same questions. To the researchers surprise – which was a very relevant finding of the study – the students who worked with the digitised sources stayed much more on the surface of the documents than the students who worked with analogue.

And why did this occur? The authors discuss their reflections, speculating that, perhaps, it was due to the fact that students who worked with digital were rather attached to the descriptive issue of what appeared in the digital environment displaying the Collection. How the document was described, to which period it belonged, to which collection it belonged, etc.; while the students who did this exercise with the analogue source tried to read the document, without relying on any other clues, so presumably they engaged differently to create a context for that source. Their historical imagination, their critical and creative exercise went a little further, one could say, or, at least, it was presented other qualitative features; all we know is that the digital component made a difference.

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Marc Bloch, in the manuscript Apology of History, long before the Internet and computers became mainstream in our world, already told us about historical observation and that questions are key to our craft. Moreover, he emphasized, these questions must be flexible and open to surprises so that they can "serve as a magnet for the filings of the document". XVI With the constant mediation of the digital component, we will need to adjust this observation and make history students and historians aware of the need to ask new questions, or, something even more fundamental, not to forget to ask **Digital** literacy powerful them. is. on this path, bet to reinforce our magnets.

At this moment of learning to ask new questions, there is indeed some confrontation that is new, but there is also a specificity of our discipline that comes from a long time ago and has to do with the text of Bloch and so many others who dedicated themselves to thinking what history is and what makes us historians: document criticism. In a way, we will be renewing, but not re-founding this criticism. What seems useful is to widen the range of questions, but they will necessarily keep a common root to the basic investigation, such as "What? Who? When? Where? Why?". Now we are approaching a digital critique of sources and data, an intellectual construct that goes through hybridisation, digital literacy and the need for dialogue with other areas, of working in the contact zones of disciplines. All criticism, if we seek its foundations, will require multimodal literacies and in the case of working with in interaction with the digital component this *composite* nature needs to come more to the fore, to be more consciously worked on.

Conclusions

To conclude, I would like to take this hook with the Canadian study of students with analog and digital sources and resume an idea that was suggested in the introduction, when I brought the pioneering example of digital technology in the classroom, with the case of the CD-ROM and the digitized sources to which it gave access. In all, there were more than 700 documents, of various types, reaching almost five thousand pages of textual sources, four and a half hours of audio, forty-five minutes of films, plus 700 iconographic items. TVII Rosenzweig and Steven Brier, his co-editor, reflected on the repercussion of the new possibility – to bring so many and varied sources into the classroom, in an organized and accessible format – in the teaching practices of the historian community:

computer technology can allow students and other readers to have more control over their learning, to move at their own pace, and to make decisions about the direction they want to go in and the byways they want to investigate. New technology also may free up teachers from some of the most repetitive and least edifying aspects of teaching and allow them to spend time working directly and creatively with students. XVIII

This autonomy of the students, which the authors are talking about, is directly related to the proposals of active methodologies in education. In history teaching, we can also relate it to the notion of "shared authority", formulated by the historian Michael Frisch. This shared authority should exist among all subjects who are involved with historical knowledge - producing, disseminating, criticizing - and can, in this way, also be a guide for classrooms as well. In public history, shared authority reinforces the democratic character of the practice, so that all subjects

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involved can contribute and use their different knowledge and traditions. This is also what can happen in classroom displays, dialogues and negotiations all the time, when all sides are learning and contributing. Students with the autonomy to do their part in an operation of "digital school historiography", as we have already written, a "history that can/could be written from experiences such as those described above:

writing of the history made at school through the action of the teacher who uses critically the potential of information and communication technologies in the narrative of his class and the construction of digital teaching materials that explore and go beyond the specificity of this medium, taking into account even the participation, creativity and authorship of the subjects positioned as students. XIX

It remains the invitation to reflect on the possibilities of co-construction, experimentation and critical historical thinking from active methodologies that make this propositional interaction with the digital component. We are not "reinventing the wheel", but as Bloch also said, in the aforementioned manuscript, the history book and, in its entirety, the historian, the history teacher, may very well share the inherent openings of a knowledge that is never finished:

Every history book worthy of the name should have a chapter or, inserted at the turning points of the exposition, a series of paragraphs which would be entitled something like, 'How can I know what I am going to tell you?' I am convinced that, on becoming acquainted with these confessions, even readers who are not of the trade would experience real intellectual pleasure. The spectacle of the quest, with its successes and setbacks, rarely bores. It is the all-ready that spreads ice and boredom.^{XX}

Bloch wrote in another time, thinking in another context, but I consider his statement about the ice and the boredom of the "all ready" very valuable. Let us be, therefore, open to more hands-on history.

Notes

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II (LUCCHESI, 2014).

III Founder of one of the pioneering centres for media history in the United States, the Center for History and New Media at George Mason in Virginia. For a brief history of the RRCHNM, see: https://rrchnm.org/our-story/.

^{IV} Textbook accompanied by CD-ROM, collectively authored: *Who Built America? From the Centennial of 1876 to the Great War of 1914*, a multimedia CD-ROM (New York: Voyager, 1993); written with S. Brier and J. Brown. For the full description, see: https://20.rrchnm.org/items/show/349.

^V (LUCCHESI; SILVEIRA, 2021).

VI Laboratório de Humanidades Digitais (LHuD), available at: https://cpdoc.fgv.br/laboratorios/lhud; Laboratório de Humanidades Digital da UFBA (LABHD), available at: https://www.labhd.ufba.br; Laboratório em Rede de Humanidades Digitais do Instituto Brasileiro de Informação em Ciência e Tecnologia (LARHUD), available at http://www.larhud.ibict.br; and Laboratório de História Digital (LAHISD), available at: http://www.ich.ufu.br/lahisd. For the Laboratory of Digital Humanities (dhLab) of PUC-Rio no dedicated page was found.

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VII Abstract, in English, available at: https://www.c2dh.uni.lu/events/digital-history-balance-about-brazilian-perspective.

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VIII See: LADURIE, Emmanuel Le Roy, "La fin des érudits", Le Nouvel Observateur, 8 May 1968, p. 99.

IX (LUCCHESI; SILVEIRA, 2021).

^X (ZAAGSMA, 2013, p. 17; my translation).

XI (BURDICK & WILLIS, 2011; LIVINGSTONE, 2011).

XII Research that gave rise to the thesis: For a New Hermeneutics of Practice in Digital Public History: Thinking with memorecord.uni.lu, defended at the University of Luxembourg in 2020.

XIII For more information on the C2DH, see: https://www.c2dh.uni.lu.

XIV Memorecord was created as a digital platform for crowdsourcing immigration memories in Luxembourg. Available here: https://memorecord.uni.lu.

XV (KEMMAN, 2020).

XVI (BLOCH, 2002, p. 79).

XVII (KOVALCHICK AND DAWSON, 2004, p. 665).

XVIII (ROSENZWEIG and BRIER, 1994).

XIX (COSTA, LUCCHESI, 2016, p. 343, my translation).

XX (BLOCH, 2002, p. 83, my translation).

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